OFFICE OF WATER QUALITY:
DRINKING WATER PERMIT PROGRAM

Table of Contents

(17 total pages)

Goals of the Drinking Water Branch and Construction Permit Program

The Office of Water Quality's Drinking Water Construction Permit program is unlike any other permit program administered by IDEM. Each of the other programs protects the environment by regulating the emission of pollutants into the air, water, or land. However, instead of regulating emissions, the drinking water permit program regulates the construction of facilities that secure, treat, store, or distribute water.

Thus, the IDEM Drinking Water Program's primary mission is to protect the public health, rather than the environment. It ensures the public will have a safe and adequate drinking water supply and that the construction and operation of public water systems will not effect the environment.

In Indiana, 60 percent of our drinking water is supplied from ground water. The OWQ Drinking Water Branch also oversees the mandatory Wellhead Protection Program, which went into effect March 28, 1997. It is a prevention oriented approach to protecting the groundwater that focuses on limiting and managing the types of activities that may occur in the environment near well fields.

Meanwhile surface water, which provides the other 40 percent of our drinking water, is protected by several other IDEM-issued permits, including: air pollution permits which result in less polluted rain, National Pollutant Discharge Elimination System (NPDES) permits which require wastewater discharges to be treated before being returned to our lakes and streams, and by land disposal permits which limit pollutants entering the water cycle.

Standards; Design and Construction Standards for Public Water Systems

Standards establishing maximum allowable limits of contamination for water being made available for human consumption are defined by the U.S. Safe Drinking Water Act of 1973. The Act was amended in 1986 and re-authorized in 1996.

In 1986, responsibility for ensuring compliance with the Act was transferred from the Indiana State Department of Health to the Drinking Water Branch of the IDEM. Permits issued by the Construction Permit Section of the Drinking Water Branch of IDEM implement the standards of the Act. The Compliance Section of the Drinking Water Branch monitors for compliance those standards, while IDEM's Office of Enforcement works to get any violators back into compliance with those standards.

The health based requirements of the Safe Drinking Water Act, and amendments to it, are reflected in Title 327, Article 8, Rule 2 of the Indiana Administrative Code (327 IAC 8 -2). Rule 2 establishes operational protocol, sets construction standards, and delineates maximum contaminant levels for drinking water which are used by the IDEM Drinking Water Construction Permit Program to protect public health in Indiana.

327 IAC 8 -2 outlines analytical methodologies for sampling, testing, monitoring and reporting on a wide range of possible contaminants, and establishes maximum contaminant levels (MCLs) intended to protect human health. Using those methodologies, public water suppliers are required to stay under the MCLs for organic compounds like trihalomethanes and other volatile and synthetic organic compounds, inorganic chemicals like sodium, microbiological contaminants like fecal coliform and E. coli bacteria, radioactive contaminants, and lead and copper. Because there is a correlation between water clarity and contamination, suppliers using surface waters for any part of their source are required to test for turbidity. In addition, Rule 2 outlines standards for filtration, disinfection, and corrosion control.

The Construction Permit Section's current procedures for reviewing the applications, plans and specifications for construction of any of the various parts of a public waster system are based on the guidance provided by Rule 2 , by the Recommended Standards for Water Works (commonly known as the Ten States Standards) and by the American Water Works Association and other professional organizations. The design and construction of any public water system project must conform to these standards.

Working with the Indiana Water Pollution Control Board, the Construction Permit Section recently combined the Ten States Standards and IDEM's current procedures for the design and construction of water main extensions into a single set of clear and comprehensive standards. The resulting rule can be found as 327 IAC 8-3.2 in the Indiana Administrative Code.

Similarly, because approximately 80-percent of all the permits issued by the OWQ Drinking Water Branch are for water main extensions, and because these water main extension projects are so similar in nature, the Board also has granted preliminary approval to Rule 327 IAC 8-3.5, to streamline the permitting process. Although these new rules change the procedure of obtaining a permit, they do not change the circumstances under which a permit is required.

Under the new Permit-by-Rule procedures, those planning water main extensions must submit a Notice of Intent Letter to IDEM in lieu of filing a permit application. The letter must be sent by certified mail thirty (30) days before any construction starts, and must include certifications from the engineer, and the water system, along with information on average daily demand, system capacity, and 2 year average peak demand. In addition, all plans and specifications must meet the

standards set out in 327 IAC 8-3.2 and must be on file with the public water system prior to construction, and available on-site during construction.

It is anticipated these new rules, which will reduce the regulatory burden on public water supply systems while ensuring continued protection of public health, will be finalized and effective by the summer of 1998. They were developed with substantial input and guidance from the professional organizations of the regulated community and the public.

Indiana's Wellhead Protection Program

The cornerstone of the Indiana Wellhead Protection Program is the Wellhead Protection Rule which became effective on March 28, 1997. Under the rule, community public water supply systems are required to submit to the IDEM, for approval, a complete wellhead protection program.

The rule requires the formation of a local planning team, the delineation of a wellhead protection area for the well field(s), the identification of all potential sources of contamination, a management plan for each potential source of contamination, and a contingency plan.

The local planning team must have a least one member that is impacted by the wellhead protection area. A variety of delineation methods are allowed depending on the unique circumstances of the well field. Potential sources of contamination include both regulated and unregulated sources. Management plans at a minimum must have an education component, but can include ordinances, zoning, monitoring, and the implementation of best management practices. The contingency plans address emergencies impacting the distribution system and contamination of the source water.

The program and its requirements are discussed in detail in several documents available from the IDEM.

see: http://www.in.gov/idem/water/whpp/index.html

IDEM also recently initiated a statewide well mapping project using the Global Positioning System, and will place that data on a Geographic Information System.

The Regulated Community; Who needs a Public Water System Construction Permit?

Any “public water system” (PWS) in the state of Indiana that is proposing to “construct, install or modify any facility, equipment, or device for any public water supply” must first obtain a permit from the Construction Permit Section of the Drinking water Branch. A “public water system” means a public water supply for the provision to the public of piped water for human consumption, if such system has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year.

Facilities, equipment and devices include, but are not limited to: new treatment plants, water storage tanks, booster stations, wells, or chemical feeders. This also includes water main extensions, regardless of length.

A permit is not required for replacement projects of similar design and capacity that will not adversely change the plant operation, its hydraulic design or waste products, or the distribution system design, operation or capacity. This means that “like replacement” projects, such as changing out an old high service pump with a new pump with the same rated capacity do not need a permit. Nor are construction permits needed for the replacement of existing water mains, as long as the same location and material type, diameter, and class pipe are used. IDEM can confirm in writing that a permit is not required if the applicant requests this for reasons such as record keeping .

So, if your public water system is going to install an additional storage tank, start adding phosphate to control corrosion, replace an undersized well pump or boost the pressure in a remote part of town, it will need to get a construction permit from IDEM prior to beginning work on the project. In addition, whether it be a thirty (30) foot length of PVC water main to close a loop in the system or 5,000 feet of ductile iron pipe in a new subdivision, a construction permit is required.

<u>Public water systems include</u>:

Community Systems
- Cities
- Towns
- Private Water Companies
- Mobile Home Parks

Non-Community Systems (based on populations served and the number of days served)

- Transient
  - Campgrounds
  - Churches
  - Restaurants
  - Highway rest areas
  - Gasoline stations
- Non-Transient
  - Schools
  - Industries
  - Motels

Types of Construction Permits Issued by the Drinking Water Branch

The Drinking Water Permit Program differs from the other permit programs in that it does not currently issue operating permits for water treatment plants and other facilities. Instead, it regulates the design and construction of public water system facilities such as water main extensions, water wells, water pumping stations, water storage tanks, chemical additions, and treatment facilities.

What information do these applications [with permit application Attachments A through E] **request?**

An application for a Public Water System (PWS) Construction Permit must be prepared by, or under the supervision of, a professional engineer registered in the State of Indiana, and must bear his or her dated signature and seal. Like all other IDEM permit applications, it consists of two parts; administrative and technical.

The administrative portion includes points-of-contact, ownership and location information. It must include a Public Water System Identification Number (PWSID), or a PWSID can be assigned to a new public water system. The applicant also must supply a list of Potentially Impacts Parties (PIPs) who may be affected by construction of the proposed facility. A representative from the public water system must certify with his or her dated signature that the list of potentially affected parties is correct. Although the permit writer generally contacts applicants to request additional information, incomplete applications can lead to the denial of a permit (327 IAC 8 -3 -4). Furthermore, failure by the applicant to identify all PIPs can result in the voiding of a permit decision.

Any required fees also must be included in the application. Privately owned public water systems are required to pay a fee.

The technical portion of the application must address all applicable questions (from Attachments A through E) based on the type of project proposed. The plans and specifications required by the application must also be prepared by, or under the supervision of, a professional engineer. Each page must bear his or her dated signature and seal.

Typical questions asked by the reviewing engineer for each of the following types of projects is listed below:

> Water Mains [Permit Application Attachment A]

* What is the raw data from the `flow test' that the design of the water main extension is based?
* What peak daily demands are anticipated from each of the proposed service connections?
* What, if any, fire flow rate is being proposed for this water main extension?
* How will pressure change due to elevation variation and friction loss?
* What materials will the water main extension be constructed of?
* How will the water main extension be installed, tested, and disinfected?
* Has the public water system agreed to furnish water to the proposed water main extension project, and does it meet all local requirements?

> Well Construction [Permit Application Attachment B]

* What is the capacity and depth?
* What is the length and type of casing?
* What pump lubrication will be used?

> Pumping Station [Permit Application Attachment C]

* What is the highest know flood elevation in the area?
* What is the expected peak demand?
* What is the hydraulic grade line?

> Storage Facilities [Permit Application Attachment D]

* What is the capacity?
* Where are the sampling taps?
* How is it being protected from freezing, or corrosion?
* What is the hydraulic grade line?

> Chemical Additions [Permit Application Attachment E]

What is the purpose of the chemical addition?
Does the chemical have the approval of the National Sanitation Foundation or Underwriters Laboratory?
How have chemical feed rates been determined?
How will the chemical feed rates be monitored?

> Water Treatment Plant [Permit Application Attachments A through E]

* Has the Preliminary Engineering (Design) Report Memorandum been submitted?
* Have the technical specifications with the technical data for equipment been submitted?
* Describe the process; from source, to entry point, to distribution system.
* What is the basis for design considerations for equipment and structures?
* Submit a hydraulic schematic, process flow schematic and hydraulic profile.
* Have the calculations for chemical feed rates been submitted with Material Safety Data Sheets for the chemicals?
* Submit chemical feed diagrams.

How is the application reviewed, and the permit written?

The permit writers primary function here is to review the plans, specifications, and application attachments, and double check the calculations to ensure that all proposed plans conform to established construction standards. The permit is written by a review engineer, and includes specific information about the project. It lists any permit conditions that need to be fulfilled to comply with applicable rules and regulations. The permit also includes instructions for an applicant wishing to appeal the permit decision.

What is required by a Drinking Water Construction Permit?

The permit itself is assigned a permit number. It identifies the permittee (including listing the PWSID), describes the location, and describes the intent of the project.

It also may list additional permit conditions which must be met as the project is implemented. And it includes an expiration date, by which the approved construction must begin.

How are the permits implemented?

The construction permit must be used in conjunction with the submitted applications, plans and specifications. Construction of the project must meet all the conditions required by the permit as well as the standards of the submitted plans and specification. Construction must commence within one (1) year of the effective date of the permit. Modifications can be made to the permit, plans and specifications by contacting the review engineer or the section chief of the Construction Permit Section.

Permit Fees

As per 327 IAC 8-3-7 there are no drinking water permit fee requirements for any governmental entity, regional district, conservancy district, school corporation, or any not-for profit organization. There also are no fees assessed for water extensions of less than 2500 feet. Privately owned water utilities are required to pay a permit fee, including those private companies serving municipalities.

Existing Fee Schedules for Privately Owned Facilities:

New Treatment plants:	
Groundwater:	
<500,000 GPD	$ 875
>500,000 GPD	$1,750
Surface Water	
<500,000 GPD	$1,250
>500,000 GPD	$2,500
Expansions	
Up to 50% Capacity	
<500,000 GPD	$ 625
>500,000 GPD	$1,250
Greater than 50% Capacity	
<500,000 GPD	$1,250
>500,000 GPD	$2,500
Wells	$ 500
Pump or Pump Stations	$ 100
Chemical Additions	$ 250
Storage Tanks	$ 200
Miscellaneous Process Modifications	$ 50
Distribution Systems	
2,501 - 5,000 linear ft.	$ 150
5,001 - 10,000	$ 250
> 10,000	$ 500

Timeliness Requirements

In 1994, the Indiana General Assembly enacted Senate Enrolled Act (SEA) 417 (IC 13 -15 -4 -1). That law established time frames within which IDEM is expected to complete the review of applications it receives for environmental permits. SEA 417 requires that applications for water facility construction permits be acted upon within 120 days. However, State rules [327 IAC 8-3-2 (f)] already require that all permit decisions on such permit applications be made within 60 days.

Drinking Water Permit Application Review Process Summary

> Once applications are received, the clock starts running on the 60-day time period allotted by the rules governing Drinking Water Construction Permit applications.

> Local government officials (County Commission, Mayor, and City Council or Town Board) are notified by mail that an application for a permit has been received. The letter describes the project and its location.

> A review engineer determines if an application is complete; all technical and administrative information is provided, and any required fees are paid.

> If the application is incomplete, the engineer will make a written request for any missing information. The 60-day clock will then be stopped until the applicant provides the requested information.

> After the applicant adequately responds to any requests for additional information, the review engineer will restart the 60-day clock, and resume the review.

> However, the permit can be denied if the applicant does not respond sufficiently.

> Potentially Impacted Parties (PIPS) also must be notified. This requirement must be met in one of two ways, depending on whether there are more than ten (10) listed PIPS, or fewer than ten (10) PIPs.

If there are ten (10) PIPs a notice may be published in a local newspaper of general circulation. The notice must describe the proposed project and allow a thirty (30) day public comment period. Afterward, IDEM will address all concerns related to permitting the proposed project it received during the comment period. If the requirements for public input are met in this manner, any permit that is subsequently issued will become effective immediately and the permittee may commence construction.

If there are fewer than ten (10) PIPs, those individuals may instead be notified

by IDEM when it issues a decision regarding the permit. That Notice of Decision includes information on where to view the pending permit and how to appeal IDEM's decision. The PIPs then have eighteen (18) days to consider the pending permit and to file an appeal if they so chose. However, if the requirements for public input are met using this alternative, the permit does not become effective until the eighteen (18) day appeal period has ended, and no construction can begin until that time. Although the size of the administrative work load within the Drinking Water Construction Permit Section can result in the use of newspaper notifications for fewer than ten (10) PIPs, notice will always be issued by one of these two means.

> Once a completed application fully reviewed and approved, a permit is drafted and issued. Copies of the permit are sent to the applicant, the county health department, the consulting engineer, the IDEM field inspector, the OWQ file room, and to the developer (if the town is the applicant) or the town board (if a developer is the applicant).

> The permit becomes effective immediately for those applicants that prompted an earlier public comment period by listing more than ten (10) PIPs. However, for applications listing fewer that ten (10) PIPs, IDEM must mail a Notice of Decision (NOD) to each PIP at this time.

> Petitions for a hearing to appeal permit issuances or denials must be submitted to the Office of Environmental Adjudication within 15 days (plus 3 days for mail delivery, or 18 total days) of the mailing of the permit and the NODs.

> The petition to appeal must be filed by the applicant, by a PIP who believes themselves to be adversely impacted, or by any other party entitled by law to a review of the permit. The appellant must provide a reason for the requested appeal, list issues proposed for consideration at the hearing, and identify the conditions which would satisfy the requirements of the law necessary to reverse the prior decision.

> If an appeal is filed, the permit may be stayed pending the review of an Environmental Law Judge.

> Construction must begin within twelve (12) months of the effective date or the permit expires.

List of Other Possible Permits or Approvals Which May Be Required Along With A Drinking Water Construction Permits

From IDEM OWQ:

A NPDES Wastewater Permits or state operating permit for discharging :

Disinfection Water

When water is mixed with a disinfectant during the treatment process, the resulting wastewater may require a NPDES or state operating permit to assure proper discharge or disposal.

Backwash Water

When water is forced through water treatment equipment (such as filters) in the opposite direction of normal flow in order to clean that equipment, the resulting wastewater may need a NPDES or state operating permit to assure proper discharge or disposal.

Wastewater

When wastewater is generated through a process such as producing drinking water, a NPDES or state operating permit may be needed to assure proper discharge or disposal.

From Local Government or Private Property Owners:

Easements
Zoning
Highway or Rail Crossings

From Indiana Department of Natural Resources (DNR) Permit Administration:

Construction in a Floodway Permit
Stream Crossing Permit
Water Well Permits

From DNR Division of Historic Preservation:

Archaeological or Historic Burial Site Disturbance

From the U.S. Army Corp of Engineers:

A Section 404 Wetlands Permit for compliance with the Clean Water Act , primarily regarding dredging, draining or filling a protected wetland area

From IDEM, OWQ: A Section 401 Water Quality Certification

Prior to issuing a 404 Wetlands Permit, the Corps of Engineers requires the applicant to obtain a Section 401 Water Quality Certification stating that the activities for which a Section 404 Permit (or, less frequently, other federal permit) is need will not cause violations of water quality standards or adversely impact water quality.

Summary of Public Notice Opportunity/Input

Public Notice for Permit Issuance

Regardless of the type of proposed project, the application for a Drinking Water Construction Permit requires the applicant to list all Potentially Impacted Parties (PIPs); persons who may be affected by the issuance of a permit. Failure by the applicant to identify all PIPs can lead to the voiding of a permit decision. Once the PIPs are identified, meeting the public notice requirements associated with issuing a permit must be met in one of two ways, depending on whether there are more than, or less than, ten PIPS listed by the applicant.

If there are ten (10) or more PIPs a notice may be published in a local newspaper of general circulation. The notice must describe the proposed project and allow a thirty (30) day public comment period. Afterward, IDEM will address all concerns related to permitting the proposed project it received during the comment period. On the other hand, if there are fewer than ten (10) PIPs, those individuals may instead be notified by IDEM when it issues a decision regarding the permit. That Notice of Decision includes information on where to view the pending permit and how to appeal IDEM's decision. The PIPs then have eighteen (18) days to consider the pending permit and to file an appeal if they so chose. Although the size of the administrative work load within the Drinking Water Construction Permit Section can result in the use of newspaper notifications for fewer than ten (10) PIPs, notice will always be issued by one of these two means.

Petitions to appeal must be filed with the Office of Environmental Adjudication by the applicant, a PIP who believes themselves to be adversely impacted, or any other party entitled by law to a review of the permit. The appellant must provide a reason for the requested appeal, list issues proposed for consideration at the hearing, and identify the conditions which would satisfy the requirements of the law necessary to reverse the prior decision. If the appeal is determined to have merit, it will then be considered by an Environmental Law Judge.

Public Notice for Rulemakings

From time to time the Drinking Water Permit Section may publish notice of a rulemaking by the Water Pollution Control Board with respect to rules governing the issuance of Drinking Water Construction Permits or the standard upon which such permits are based. Currently the Drinking Water Branch is helping the board to develop a new rule on constructing water main extensions, which it expects could be finalized by mid 1998. Such rulemaking procedures always include opportunity for public input.

Public Notice for Non-compliance with Drinking Water Standards

In Title 327, Article 8, Rule 2 of the Indiana Administrative Code (327 IAC 8 -2), the Water Pollution Control Board has established drinking water standards. Section 14 of the rule (327 IAC 8 - 2 -14) requires that owner/operators of public water supply systems that fail to comply with MCLs (maximum contaminant levels), or any of the other drinking water standards established by Rule 2 , report that failure to the commission of IDEM within forty-eight (48) hours.

Section 15 of the rule (327 IAC 8 -2 -15) also sets out various public notice requirements regarding the violation or failure of an owner or operator of a public water system to comply with MCLs, treatment techniques, and variance schedules. Such owner/operators are required to submit to the commissioner of IDEM a copy of each such notice. Although the commission may give public notice on behalf of the owner/operator, the owner/operator of the public water supply system remains legally responsible for providing public notice. The public notification requirements include:

1) Publication in a local daily (or weekly) newspaper of general circulation as soon as possible, but no later than fourteen (14) days after the violation or failure.

2) Notification by mail (with a water bill) not later than forty-five (45) days after the violation or failure. The Commissioner of IDEM may waive this requirement if the violation has been corrected.

3) For violations of MCLs which may pose an acute risk to human health, a notice to radio and television stations serving the area as soon as possible, but in no case later than seventy-two (72) hours after the violation or failure.

If the violation or failure continues to exist, the owner of operator of the system must give public notice of such at least every three (3) months so long as the violation or failure exists. Similar reporting requirements can be imposed on system owners or operators who fail to perform monitoring, comply with testing procedures, or are subject to variances or exemptions to the drinking water standards established by Rule 2.

Public Notice for Requests for Variances from Drinking Water Standards

In some instances, the commissioner of IDEM may grant or renew, for up to one(1) year, variances to a public water supply system regarding the drinking water standards established in Rule 2 (327 IAC 8 -2, See sections 25 through 28). When acting on a variance request, the commission must comply with the Administrative Orders and Procedures Act (IC 4 -21.5). The Commissioner may provide notice and opportunity for a public hearing, but shall provide such notice for variances with a schedule for compliance with a rule, or for variances from a specific treatment technique.

Public notice requirements for opportunity of a public hearings on variance

requests include:

> Posting a notice in the principal post office of each area served by the public water system seeking a variance,
> Publishing a notice in a newspaper of general circulation in the area served by the public water system seeking a variance,
> Mailing a notice to the appropriate state or local agencies

The notice shall include a summary of the proposed variance and shall inform interested persons that they may request a public hearing. Such requests must be submitted within thirty (30) days after issuance of the public notice. The request must identify the person requesting the hearing, include a brief statement of the interest of that person in the proposed variance, and describe the information they intend to present at a hearing. They also must provide their signature.

If a hearing is to be held, the commissioner of IDEM issue notice fifteen (15) days before hand. He will notify the public of the hearing in the same manner as when notifying the public of the opportunity for a hearing; by posting a notice in the principal post office of the area and publish notice in an area newspaper. He will notify the person requesting the hearing. The notice will include a statement on the purpose of the hearing, the time and location of the hearing, and list an contact person at IDEM for those persons wishing further information. At least one hearing will be held in the affected county.

The hearing will be conducted by a hearing office who may call witnesses and who shall receive written and oral testimony. The commission, taking into consideration the information obtained at the hearing[s], shall act on the request for the variance within thirty (30) days.

For further details on public notice requirements associated with Drinking Water Standards, and non-compliance with or variances from those standards, please refer to the Indiana Administrative Code; 327 IAC 8 -2 - (1 - 47).

Further Reading/Obtaining Additional Information Regarding Public Water System Construction Permits

Phone: 317/308-3331 Fax: 317/308-3339

E-mail: mholling@dem.state.in.us

Indiana Statutes; Indiana Code (IC)

IC 13 - 18 - 16 - (1 - 15) Public Water Supplies
(Title 13, Article 18, Chapter 16, Sections 1 through 15).

IC 13 - 18 - 17 - (1 -7) Groundwater Protection

Indiana Administrative Code (IAC): State Rules
(Title, Articles, Rules, Sections)

Title 327 IAC, Article 8

Rule 1:	Public Water Supply Standards
Rule 2:	Drinking Water Standards
Rule 3:	Public Water Supply Construction Permits
Rule 4:	Approval of Public Water Supply Plans
Rule 5:	Construction o f Public Water Supply Systems Under Order of IDEM
Rule 6:	Improvements of Public Water Supply Systems Or Treatment Works Under Order of IDEM
Rule 7:	Water Supply and Distribution Systems; School Buildings and Related Facilities
Rule 8:	Water Supply and Distribution Systems; Mobile Home Parks
Rule 9:	Water Supply and Distribution Systems; Agricultural Camps
Rule 10:	Cross Connections; Control; Operation
Rule 11:	Water Purification and Treatment Works; Operation; Requirements
Rule 12:	Classification of Water and Wastewater Treatment Plants and Distribution Systems; Examination and Certification of Operators

U.S. Statutes

1974 Safe Drinking Water Act
1996 Amendments to the Act

U.S. Code of Federal Regulations (CFR)

40 CFR Parts 140, 141 and 142
Regulations associated with the Safe Drinking Water Act

Other available guidance documents:
i.e.

> Indiana Wellhead Protection Program, March 1997

> "Guidelines for Delineation of Wellhead Protection Areas," US EPA, Office of Groundwater Protection, EPA Publication No. 440/5-93-001, June 1987.